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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HARRITY SNYDER, LLP 11350 Random Hills Road SUITE 600 FAIRFAX, VA 22030			EXAMINER HOANG, HIEU T	
			ART UNIT 2152	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/766,962	<b>Applicant(s)</b> FILHO ET AL.	
	<b>Examiner</b> Hieu T. Hoang	<b>Art Unit</b> 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to the communication filed on 01/30/2004.
2. Claims 1-34 are pending and presented for examination.

### ***Claim Objections***

3. Claim 1 is objected to because of the following informalities: in the preamble, the word device is extra and should be removed. Appropriate correction is required.
4. Claim 1 is objected to because there is no structure linking the agents and the at least one resolver with one another. Since this is a system claim, all components have to be linked or coupled to one another. Appropriate correction is required.
5. Claim 20 is objected to for the same rationale as in claim 1. The gateway and the NIC have no link between one another.
6. Claim 34 is objected to for the same rationale as in claim 1. The "means for collecting information" and "means for identifying" have no link between one another.
7. Claims 1, 13, 20, and 34 are objected to because the preamble fails to particularly point out and distinctly claim the subject matter that the applicant regards as his invention. In each claim, the preamble is too general, making the claim vague and indefinite.

### ***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1, 13, and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
10. Claim 13 is rejected for the step of "identifying one or more of the network devices as network devices that provide services to a subscriber of the network based information that identifies the subscriber". The claim does not recite how to obtain "information that identifies the subscriber," making it vague and indefinite.
11. Claim 1, 34 are rejected for the same rationale in claim 13 above.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1, 4-21, 23-26 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al. (US 6,950,876, hereafter Bright), in view of Prasad et al. (US 7,197,125, hereafter Prasad).

14. For claim 1, Bright discloses one or more devices in a network comprising:

agents configured to collect information relating to other devices in the network (fig. 2, protocol gateways PGs and application gateways AGs 211-221 collecting information from AAA server, SIP server, application server, etc); and

Bright does not explicitly disclose:

at least one resolver configured to identify, based on identification information of a subscriber, network resources that manage elements associated with the subscriber to implement network services for the subscriber, the resolver performing the identification of the network resources in accordance with a resolution process determined based on the information collected by the agents, the resolution process specifying a path from the identification information of the subscriber to the network resources.

However, Prasad discloses:

at least one resolver configured to identify, based on identification information of a subscriber, network resources that manage elements associated with the subscriber to implement network services for the subscriber (abstract, lines 6-15, service selection framework generates a list of services based on subscriber's membership and collected information such as authentication and authorization, fig. 1, authentication server providing security service for the subscriber), the resolver performing the identification of the network resources in accordance with a resolution process determined based on the information collected by the agents (abstract, lines 10-15, authorization information

is retrieved by an agent from the directory server and used to identify services or network resources for the user), the resolution process specifying a path from the identification information of the subscriber to the network resources (fig. 4A, a path from authorization the user using identification information 4-005 to engage network services for users 4-011).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Bright and Prasad to provide the system of Prasad a plurality of agents to collect information from different services, therefore providing different services to the users.

15. For claim 13, Bright discloses a method implemented in a network comprising:

collecting information pertaining to a plurality of different network devices via a set of collection agents (fig. 2, protocol gateways PGs and application gateways AGs 211-221 collecting information from AAA server, SIP server, application server, etc); and

Bright does not explicitly discloses:

identifying one or more of the network devices as network devices that provide services to a subscriber of the network based on information that identifies the subscriber and based on the collected information.

However, Prasad discloses:

identifying one or more of the network devices as network devices that provide services to a subscriber of the network based on information that identifies the subscriber (abstract, lines 6-15, service selection framework generates a list of services based on subscriber's membership) and based on the collected information (abstract, lines 10-15, authorization information is retrieved by an agent from the directory server and used to identify services or network resources for the user).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Bright and Prasad to provide the system of Prasad a plurality of agents to collect information from different services, therefore providing different services to the users.

16. For claim 20, Prasad discloses a system comprising

a gateway configured to receive network service requests from or on behalf of subscribers in a network, at least some of the service requests requiring configuration of one or more network elements to satisfy the service request (fig. 1, service selection gateway, fig. 5A, receives service request from a subscriber, then requests for privilege token from authorization server, and requests list of services from directory-enabled service selection);

a network information collector (NIC) configured to identify a management entity associated with the one or more network elements required to satisfy the

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service request (fig. 1, col. 11 lines 31-35, the directory-enabled service selection system generates a list of services and user information to answer the user's request for services)

Prasad does not explicitly disclose:

the NIC including: a plurality of agents configured to collect information relating to a state of a plurality of network elements, the collected information being used to identify the management entity.

However, Bright discloses:

a plurality of agents configured to collect information relating to a state of a plurality of network elements, the collected information being used to identify the management entity (fig. 2, protocol gateways PGs and application gateways AGs 211-221 collecting information from AAA server, SIP server, application server, etc).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Bright and Prasad to provide the system of Prasad a plurality of agents to collect information from different services, therefore providing different services to the users.

17. For claim 34, Bright discloses at least one device comprising:

means for collecting information pertaining to a plurality of different network devices via a set of customizable collection agents (fig. 2, protocol gateways PGs and



application gateways AGs 211-221 collecting information from AAA server, SIP server, application server, etc); and

Bright does not explicitly disclose:

means for identifying one or more of the network devices as network devices that provide services to a subscriber of the network based on information that identifies the subscriber and based on the collected information.

However, Prasad discloses:

means for identifying one or more of the network devices as network devices that provide services to a subscriber of the network based on information that identifies the subscriber and based on the collected information (abstract, lines 6-15, service selection framework generates a list of services based on subscriber's membership and collected information such as authentication and authorization).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Bright and Prasad to provide the system of Prasad a plurality of agents to collect information from different services, therefore providing different services to the users.

18. For claims 4 and 19, Bright-Prasad discloses the invention as in claims 1 and 13. Bright-Prasad further discloses the other devices in the network include at least one of service activation engines, Radius servers, and Lightweight Directory Access Protocol servers (Bright, fig. 2, AAA RADIUS server, col. 7 lines 36-38, LDAP server).

19. For claims 5 and 24, Bright-Prasad discloses the invention as in claims 1, 20, and 27. Bright-Prasad further discloses the resolution process generates a resolution graph defined by vertices and edges, where the vertices represent network data types used by the resolvers and the edges represent resolvers that can perform a mapping from the data type represented by a source vertex to a data type represented by a destination vertex (Prasad, fig. 4A, col. 12 line 21-col. 13 line 36, graph of vertices and edges, e.g., 4-004 to 4-005, col. 10 lines 45-57, verifying (or resolving) for authorization using username and password).

20. For claims 6 and 25, Bright-Prasad discloses the invention as in claims 5, 24 and 29. Bright-Prasad further discloses the resolution graph is further defined by constraints that specify prerequisites for traversing the edges (Prasad, col. 11 lines 24-35, service selection dashboard request service profile information from the directory-enabled service selection system by providing membership, role, and authorization information, the directory-enabled service selection system then traverses with the user and service information).

21. For claims 7 and 26, Bright-Prasad discloses the invention as in claims 5, 24 and 29. Bright-Prasad further discloses the data types include at least one of an IP address, an IP pool, and a service activation engine ID (Prasad, col. 10 lines 47-49, data type used for authentication is username and password, however, it is known in the art that IP address can be substituted with username to identify the user, because an IP address is unique for a user connection, see Albert, fig. 2, CSG 130).

22. For claim 8, Bright-Prasad discloses the invention as in claim 1. Bright-Prasad further discloses the agents are dynamically added in response to devices being added to the network (Bright, col. 7 lines 36-38, add a LDAP interface for LDAP service).

23. For claims 9 and 16, Bright-Prasad discloses the invention as in claims 1 and 13. Bright-Prasad further discloses the software agents include at least one remote agent that executes on a one of the other devices with which the agents collect information (Bright, col. 7, lines 32-35, CORBA common object request broker architecture for provider's provisioning center).

24. For claims 10 and 18, Bright-Prasad discloses the invention as in claims 1 and 13. Bright-Prasad further discloses the network resources that manage the elements comprises service activation engines (Bright, col. 7 lines 27-41, application gateway AG interfaces with an application server for service activation).

25. For claim 11, Bright-Prasad discloses the invention as in claim 1. Bright-Prasad further discloses the network resources that manage the elements are implemented within routers (Bright, application server is a software engine and can be built within routers).

26. For claim 12, Bright-Prasad discloses the invention as in claim 1. Bright-Prasad further discloses the software agents push the collected information to the at least one resolver (Bright, fig. 2, resolver or database manager receives collected information from PGs and AGs interfaces).

27. For claim 14, Bright-Prasad discloses the invention as in claim 13. Bright-Prasad further discloses pushing the collected information to a network information collector (NIC) (Bright, fig. 2, database 209 collecting information from PGs and AGs).

28. For claim 15, Bright-Prasad discloses the invention as in claim 13. Bright-Prasad further discloses transmitting the collected information to a network information collector (NIC) when the collected information is requested by the NIC (Bright, fig. 2, database 209 collecting information from PGs and AGs).

29. For claim 17, Bright-Prasad discloses the invention as in claim 13. Bright-Prasad further discloses the information that identifies the subscriber is an IP address of the subscriber (Prasad, col. 7 line 18).

30. For claim 21, Bright-Prasad discloses the invention as in claim 20. Bright-Prasad further discloses the NIC further includes at least one resolver configured to create a resolution graph and identify the management entity by traversing the resolution graph (Prasad, col. 11 lines 24-35, service selection dashboard request service profile information from the directory-enabled service selection system by providing membership, role, and authorization information, the directory-enabled service selection system then traverses with the user and service information).

31. For claim 23, Bright-Prasad discloses the invention as in claim 21. Bright-Prasad further discloses the resolution graph is formed based on the information collected by the plurality of agents (Bright, fig. 2, protocol gateways PGs and application gateways

AGs 211-221 collecting information from AAA server, SIP server, application server, etc).

32. Claims 2, 3, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright-Prasad as applied to claim 1 above, and further in view of Albert et al. (US 7,237,025, hereafter Albert).

33. For claim 2, Bright-Prasad discloses the invention as in claim 1. Bright-Prasad does not disclose a plurality of host components that each provide a framework for execution of the agents and the at least one resolver.

However, Albert discloses the same (fig. 1, plurality of distributed service selection gateways SSG, each for execution of agents and resolver)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Bright-Prasad and Albert to provide a plurality of resolvers in order to provide the system with features such as failover, and high scalability.

34. For claims 3 and 22, the claims are rejected for the same rationale as in claim 2.

35. Claims 27 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prasad in view of Doshi et al. (US 2003/0137991, hereafter Doshi).

36. For claim 27, Prasad discloses a method of resolving a resolution request to identify a management resource, the method comprising:

receiving a resolution request that includes an identification of a subscriber (col. 10 lines 48-52, request for service using user identification);

performing a resolution process that specifies an ordering of functions required to satisfy the resolution request (fig. 4A, a path from authorization the user using identification information 4-005 to engage network services for users 4-011);

and controlling the resolvers to perform the functions specified in the resolution process (fig. 4A, a path comprising steps (resolvers) for resolving and providing services to the user from authorization the user using identification information 4-005 to engage network services for the user 4-011).

Prasad does not explicitly disclose:

selecting resolvers designed to perform the functions specified in the resolution process;

However, Doshi discloses:

selecting resolvers designed to perform the functions specified in the resolution process (p. 3, table 1, [0034] lines 4-9, minimizing cost of triangle routing, and call legs in the service selection process)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Prasad and Doshi to minimize resource cost in the process of service selection of Prasad.

37. For claim 29, Prasad-Doshi discloses the invention as in claim 27. Prasad-Doshi further discloses the resolution process generates a resolution graph defined by vertices and edges, where the vertices represent network data types used by the resolvers and the edges represent resolvers that can perform a mapping from the data type represented by a source vertex to a data type represented by a destination vertex (Prasad, fig. 4A, col. 12 line 21-col. 13 line 36, graph of vertices and edges, e.g., 4-004 to 4-005, col. 10 lines 45-57, verifying (or resolving) for authorization using username and password).

38. For claim 32, Prasad-Doshi discloses the invention as in claim 29. Prasad-Doshi further discloses the resolution graph is further defined by constraints that specify prerequisites for traversing the edges (Prasad, col. 11 lines 24-35, service selection dashboard request service profile information from the directory-enabled service selection system by providing membership, role, and authorization information, the directory-enabled service selection system then traverses with the user and service information).

39. For claims 33, Prasad-Doshi discloses the invention as in claim 29. Prasad-Doshi further discloses the data types include at least one of an IP address, an IP pool, and a service activation engine ID (Prasad, col. 10 lines 47-49, data type used for authentication is username and password, however, it is known in the art that IP

address can be substituted with username to identify the user, because an IP address is unique for a user connection, see Albert, fig. 2, CSG 130).

40. For claim 30, Prasad-Doshi discloses the invention as in claim 29. Prasad-Doshi further discloses selecting resolvers further includes associating a cost value with the edges of the resolution graph; and selecting edges based on the associated costs (Doshi, table 1 on p. 3, [0034] lines 4-6, cost of routing should be minimized, or selecting gateway should be based on the least cost).

41. For claim 31, Prasad-Doshi discloses the invention as in claim 30. Prasad-Doshi further discloses edges that are associated with remote resolvers are associated with higher cost values than edges associated with local resolvers (Doshi, [0034] lines 4-6).

42. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prasad-Doshi as applied to claim 27 above, and further in view of Albert.

43. For claim 28, Prasad-Doshi discloses the invention as in claim 27. Prasad-Doshi does not disclose a plurality of host components that each provide a framework for execution of the agents and the at least one resolver.

However, Albert discloses the same (fig. 1, plurality of distributed service selection gateways SSG, each for execution of agents and resolver)



Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Prasad-Doshi and Albert to provide a plurality of resolvers in order to provide the system with features such as failover, and high scalability.

### ***Conclusion***

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Sundaram et al. US 2003/0051037.
- Chandrashekar et al. US 2003/0220872.
- Civanlar et al. US 2003/0191781.
- Centemeri et al. US 2005/0108423.
- Martin, JR et al. US 2004/0215711.

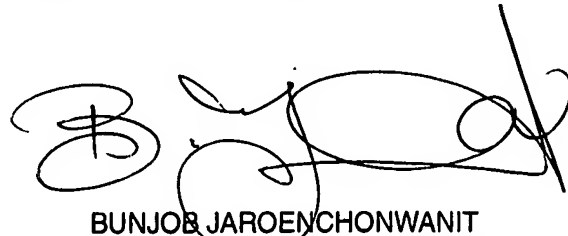
45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HH/  
HH



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9/17/7